

An anemometer for run of wind or average wind speed measurements, when used together with an electronic counter or data logger. In operation, the 3-cup rotor turns a shaft and hence a magnetic actuator. The resultant varying field causes a mercury wetted reed-switch to make and break contact once per revolution of the rotor. The contacts are bounce free, simplifying connection to electronic circuits, and no power is required apart from that necessary to detect contact closure, thus facilitating use at remote sites. The rotor is tested by comparison with a standard calibrated by BMT (formerly NPL), and an individual calibration figure is provided.

Construction is from anodised aluminium alloys, stainless steels and weather resisting plastics for exposed parts, and the bearings (stainless steel shaft running in two precision corrosion resistant ball-races) are protected from entry of moisture droplets and dust, resulting in an instrument suitable for permanent exposure to the weather.

In the marine version (A100R/WR) a touching shaft-seal is fitted in place of the standard non-contact seal for extra protection, with a small increase in threshold speed. An anti-icing heater can be fitted if required.



ANEMOMETER WITH OPTIONAL 405 SERIES MAST-TOP ADAPTOR

Specification

- Performance:** Threshold: 0.2m/s (0.6m/s A100R/WR) Max. speed: >75m/s.
Accuracy: 1% of reading* (10-55m/s), 2% of reading (>55m/s).
Distance constant: 2.3m.
- Calibration:** 0.8 revolutions per metre nominal (=1 contact closure per 1.25m).
- Temperature range:** -30 to +70°C operation, -50 to +70°C storage, (H₂O solidifies at -38°C).
- Size:** Height: 200mm, case dia. 55mm, screened cable: 3m standard length.
Rotor dia. 150mm (standard 3-cup, type R30S).
- Fixing:** Rotor: The unique Porton™ gravity sensitive fastener for rapid attachment and release.
Anemometer: Standard tripod screw (0.25 inch UNC/BSW), taper adapter also available. Intended for upright operation only.
- Electrical:** Switching voltage: Rated 72Vdc max., recommended operation: 1-5V.
Switching current: Rated 40mA max., recommended operation: 1mA.
Switch life: Rated 25 x 10⁹ operations min. (>20 years).
Min. Current: Zero (life not reduced by use in dry circuits).
Duty Cycle: 50% ±5% up to 50m/s (±10% up to 75m/s).
Impedance: 120Ω series resistor plus 10nF capacitor across line for interference suppression.
- Termination:** 3 metres of 4-wire cable with overall screen: 7 x 0.2mm overall tinned copper wire braid screen and black pvc outer. Alternative standard lengths: 6m, 10m, 15m. (where extended, max. recommended overall length: 115m).
- Connections:** Green: Terminal 1. Yellow: Terminal 2. (Red, Blue: Unused). Screen: Isolated.

*0.1m/s, 0.3 - 10m/s (0.7 - 10m/s for A100R/WR)

